

WHAT IS CLAIMED IS:

1. A method for producing a brake component adapted for use in a vehicle brake assembly comprising the steps of:
 - 5 (a) providing a brake component selected from the group consisting of brake shoe and a brake rotor, the brake shoe including a friction lining having an outer surface having surface irregularities and the brake rotor including an inner cylindrical braking surface having surface irregularities;
 - 10 (b) applying a liquid binder material to at least a portion of one of the outer surface of the friction lining of the brake shoe and the inner cylindrical braking surface of the brake rotor; and
 - (c) applying a coating material to at least a portion of one of the outer surface of the friction lining of the brake shoe and the inner cylindrical braking surface of the brake rotor to at least partially fill in the surface irregularities thereof and thereby increase a contact area between the outer surface of the friction lining and the inner cylindrical braking surface of the brake rotor.
- 20 2. The method according to Claim 1 wherein step (b) is performed prior to step (c).
- 25 3. The method according to Claim 1 wherein step (b) and step (c) are performed simultaneously by mixing together the liquid binder and the coating material to form a slurry or paste mixture.

4. The method according to Claim 3 wherein the mixture is applied by a process selected from the group consisting of spraying, dipping, blotting, brushing, ink-padding and rolling.

5 5. The method according to Claim 1 wherein the liquid binder is selected from the group consisting of a liquid phenolic resin and a silicate binder.

6. The method according to Claim 5 wherein water is added to the liquid binder.

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7. The method according to Claim 1 wherein the coating material is selected from the group consisting of iron oxide powder (Fe_2O_3); aluminum oxide powder (Al_2O_3); zircon powder; and calcium oxide powder (C_aCO_3).

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8. The method according to Claim 1 wherein the liquid binder is a silicate binder and the coating material is iron oxide powder.

9. The method according to Claim 8 wherein a concentration ratio by weight of iron oxide to silicate is in the range from about 8 to 1 to about 4 to 1.

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10. The method according to Claim 1 wherein the layer of coating material has a generally uniform thickness in the range from about 0.0001 to about 0.01 inches.

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11. The method according to Claim 1 wherein in step (b) the liquid binder material is applied to only at least a portion of the outer surface of the friction lining of the brake shoe and in step (c) the coating material is applied to only at least a portion of the outer surface of the friction lining of the brake shoe.

12. The method according to Claim 1 wherein in step (b) the liquid binder material is applied to only at least a portion of inner cylindrical braking surface of the brake rotor and in step (c) the coating material is applied to only at least a portion of the inner cylindrical braking surface of the brake rotor.

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13. The method according to Claim 1 wherein in step (b) the liquid binder material is applied to at least a portion of both of the outer surface of the friction lining and inner cylindrical braking surface of the brake rotor and in step (c) the coating material is applied to at least a portion of both of the outer surface 10 of the friction lining and the inner cylindrical braking surface of the brake rotor.

14. A brake shoe produced according to the method of Claim 1.

15. A brake rotor produced according to the method of Claim 1.

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16. A brake component adapted for use in a vehicle brake assembly comprising:

a brake component selected from the group consisting of a brake shoe and a brake rotor, the brake shoe including a friction lining having an outer surface
5 having surface irregularities and the brake rotor including an inner cylindrical braking surface having surface irregularities, said surfaces of said brake components disposed adjacent one another and adapted to frictionally engage one another when the brake assembly is actuated, wherein said brake component surface having said surface irregularities prevents complete contact between said
10 adjacent surfaces of said brake components prior to any burnishing or other contact or wear of components, whereby a green static coefficient of friction between said adjacent surfaces of said brake components is increased by applying a coating material to at least a portion of said surface of one of said brake components whereby said coating material is operative to at least partially
15 fills in at least some of said surface irregularities so as to increase a contact area between said surfaces of said brake components thereby increasing the green static coefficient of friction between said surfaces of said brake components when the brake assembly is actuated.

20 17. The brake component according to Claim 16 wherein said coating material includes a liquid binder material and a coating material.

18. The brake component according to Claim 17 wherein said liquid binder material is selected from the group consisting of a liquid phenolic resin
25 and a silicate binder and said coating material is selected from the group consisting of iron oxide powder (Fe_2O_3); aluminum oxide powder (Al_2O_3); zircon powder; and calcium oxide powder ($CaCO_3$).

19. The brake component according to Claim 18 wherein said liquid binder material is a silicate binder and said coating material is iron oxide powder.

20. The brake component according to Claim 19 wherein a
5 concentration ratio by weight of iron oxide to silicate is in the range from about 8 to 1 to about 4 to 1.

21. The brake component according to Claim 16 wherein said coating material has a generally uniform thickness in the range from about 0.0001 to
10 about 0.01 inches.

22. A drum-in-hat disc brake assembly including the brake component according to Claim 16.

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